Before the FEDERAL COMMUNICATIONS COMMISSION Washington, DC 20554

In the Matter of)	
)	
Revision of Part 15 of the Commission's Rules)	ET Docket No. 13-49
to Permit Unlicensed National Information)	
Infrastructure (U-NII) Devices in the 5 GHz)	
Band)	

COMMENTS OF ACEA AND C2C-CC

The European Automobile Manufacturers' Association (ACEA) and the CAR-2-CAR Communication Consortium (C2C-CC), which includes both automobile manufacturers as well as global equipment suppliers, highly appreciate the opportunity to provide comments to the Federal Communications Commission's (FCC) Notice of Proposed Rulemaking (NPRM) regarding the Revision of Part 15 of the Commission's Rules to Permit Unlicensed National Information Infrastructure (U-NII) devices in the 5 GHz band.

The Automotive manufacturers and the global equipment suppliers have for a number of years developed cooperative Intelligent Transport Systems (C-ITS) in the 5.9 GHz frequency band (5.850-5.925 GHz) based on frequency regulations from the FCC and the European Commission. C-ITS in the 5.9 GHz band has a strong focus on road safety with the aim to reduce the 600,000 fatalities and accidents per year in the globally increasing road traffic density. The safety services cover both vehicle-to-vehicle (V2V) and vehicle-to-infrastructure/infrastructure-to-vehicle (V2I) communication.

The relevant frequency regulation adopted by the FCC and the European Commission is a prerequisite for deployment of cooperative ITS (V2V and V2I). The 5.9 GHz band has been designated for C-ITS in a number of countries worldwide, and a possible global frequency allocation for C-ITS in the 5.9 GHz band could be considered at the next ITU World Radio Conference in 2015.

In general, harmonized spectrum supports economies of scale in particular for global markets such as the automotive industry. The Intelligent Transport System technology in the 5.9 GHz band has now been developed and is ready for deployment from 2015 on. A number of model deployments, large-scale field operational tests and demonstrations have been performed, and the 5.9 GHz communication technology as well as safety services and applications will soon provide a strong benefit to end-users in the high traffic density on the roads. With high penetration and increasing number of services all seven channels within the 5.9 GHz frequency band will be deployed for C-ITS.

Spectrum availability in the 5.9 GHz band is of course extremely important for successful and reliable services both for the initial ITS systems to be deployed within the next couple of years, but also for future hard safety systems and services including autonomous driving. And it is important to avoid radio interference to the safety related services in the ITS communication system from other radio systems.

We have carefully considered the above captioned NPRM and understand the intentions behind the proposal where parts of the requested new bands UNII-4 is seen as an important element in achieving 160 MHz channels for future innovative WIFI services.

We also see a request to remove the current limitation of U-NII to indoor only and thus achieve opportunity for peer-to-peer communication services between for instance computers and Smart Phones.

We realize that the National Telecommunications & Information Administration (NTIA) report about sharing between U-NII and Dedicated Short Range Communication (DSRC), on which C-ITS is based, provides no technical solution for sharing between the two services within the 5.9 GHz band. The NTIA indicates that this sharing will be very difficult and that the usual mitigation techniques are not able to provide protection to mobile services. We support this view of NTIA and would like to emphasize that C-ITS will include hundreds of millions of vehicle-to-vehicle (V2V) and vehicle-to-infrastructure (V2I) stations, which even if based on the same medium access technology have different system architectures and specific parameters compared to the U-NII devices.

The DSRC (C-ITS) services are safety related services that are intended to reduce fatalities and accidents on the roads both in US and the Europe. As for any other safety related communication service sufficient protection must be ensured before decision is taken on a change in frequency allocation. Furthermore mitigation of interference with safety related services will have to be based on technical measures that can be tested and validated in large scale field operational tests and not only based on advice to the enduser about operational issues. Removal of the indoor requirement and thus allowing for Peer-to-Peer communication leading to Smart-phones exchanging data within a vehicle would create unacceptable and harmful interference to the C-ITS services in the vehicle.

The global vehicle manufacturers and equipment suppliers in Europe have invested heavily in research and development of C-ITS for many years, which will lead to a successful deployment of C-ITS very soon.

The vehicle manufacturers and global suppliers are very active in the US and in the European market, creating innovations and jobs within the automotive industry and road infrastructure organizations. The deployment of C-ITS will without any doubt provide strong benefits to end users as well as traffic management organizations in the coming years. In Europe we are working closely with the road authorities and road operators in order to jointly deploy C-ITS from 2015 on.

While we are supporting general efforts towards efficient use of the radio frequency spectrum we have to express our deep concern that compatibility in the 5.9 GHz between

Intelligent Transport Systems band and wide spread Unlicensed-National Information Infrastructure (U-NII) devices will presumably not be possible and will only further delay the process towards implementation and deployment of C-ITS in the USA and in Europe.

We have not seen any technical justification towards sharing of the same spectrum between U-NII and C-ITS in the 5.9 GHz band but only an intention to create meetings to discuss the different possibilities.

In conclusion:

- We disagree with the notion that U-NII-4 should include peer-to-peer operation
 without management from an access point. Sharing under this condition will be
 very difficult in particular for safety related low latency services;
- We see no technical justification that a possible sharing study will be successful neither from the official NTIA report nor from the WIFI contributions to these proceedings;
- We have to emphasize that technical solutions need to be agreed as the basis for any frequency allocation in particular when safety related services are involved;
- The time schedule for possible ITU studies is very tight in particular as any solution for safety services needs testing and validation;
- In the frequency allocation process it is very important that sharing studies are performed without predetermination that spectrum sharing in the 5.9 GHz band should be the ultimate outcome;
- As this could very well become a global issue it is important that all stakeholders agree on the spectrum allocation solutions prior to the decision;